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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/820,788

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EXAMINER

ONEILL, KARIE AMBER

ART UNIT

PAPER NUMBER

1795

MAIL DATE

DELIVERY MODE

08/19/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/820,788	Applicant(s) LIGEOIS ET AL.	
	Examiner Karie O'Neill	Art Unit 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 February 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 and 13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11, 13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 July 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 11, 2008, has been entered.

Claim 1 has been amended. Claims 12 and 14-24 have been canceled. Therefore, Claims 1-11 and 13 are pending in this office action.

2. The text of those sections of Title 35, U.S.C. code not included in this action can be found in the prior Office Action issued on September 11, 2007.

Priority

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d) or (f), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 112

4. The rejection of Claims 1-11 and 13 under 35 U.S.C. 112, second paragraph, have been overcome based on the arguments presented on pages 2-3 of the Remarks dated December 11, 2007.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cailley et al. (US 3,761,314).

With regard to Claims 1 and 8, Cailley et al. discloses in column 3 lines 7-26 and Figure 1, an assembly of electrodes and separators obtained by winding a group of superposed negative and positive electrodes and two separator strips. Each electrode comprises a metal carrier sheet carrying the negative and positive active materials having a thickness of 0.6mm to 0.7mm, leaving an edge of the metal carrier bare and projecting in a longitudinal direction from the ends of the assembly obtained after winding the electrodes and separators. The bare portion of the metal carrier sheet is bent in a perpendicular direction to the surface of the electrodes to form a base to which the current collector for each of the electrodes is directly welded (column 4 lines 15-17). In Figure 4 of Cailley et al., it is seen that a continuous planar base extends in a direction approximately perpendicular to the longitudinal direction, and the planar base lies against and is welded to the plane connection of the surface of the cover (12) and bottom (17) of the casing.

Cailley et al. does not disclose wherein the lateral bands of the same polarity are folded in a concertina manner at a height at least equal to the distance separating them

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from the adjacent strips. However, at the time of the invention, it would have been obvious to one of ordinary skill in the art to fold the lateral band strips in a concertina manner in order to obtain the end result of a planar base that extends in a direction approximately perpendicular to the longitudinal direction as taught in Cailley. Such a modification is a design choice consistent with the end product of a lateral electrical connection as taught in Cailley, and would only involve a repeating of the shape of a component, as taught in Cailley. A change in shape is generally recognized as being within the level of ordinary skill in the art. See MPEP 2144.04.

With regard to Claim 3, Cailley et al. discloses the strips having a thickness of 0.6 to 0.7 mm. This is a thickness larger than a minimum thickness of between 10 μm and 15 μm .

With regard to Claims 4 and 5, Cailley et al. discloses wherein the bare portion of the metal carrier sheet is bent in a perpendicular direction to the surface of the electrodes to form a base to which the current collector for each of the electrodes is directly welded (column 4 lines 15-17).

With regard to Claims 6 and 7, Cailley et al. discloses wherein said connection, i.e. the base plane, is connected to a current output and the connection constitutes a current output. Cailley et al. references that it is evident that it is necessary to have connections to the electrodes which can conduct the high currents which the assembly of electrodes and separators is capable of supplying (column 1 lines 49-52). Cailley et al. also discloses that it is possible to supply current through the reliable contact between the current collectors and the electrode carriers (column 2 lines 8-15).

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With regard to Claims 2 and 9-11, Cailley et al. discloses the spacing between two consecutive spires of one carrier sheet being about 1.7mm and the thickness of the electrode portion bearing the active material being 0.6 to 0.7mm (column 3 lines 61-65.)

Cailley et al. does not disclose wherein the lateral bands are folded at a height comprised between 3mm and 4mm, said lateral band of the positive electrode has a height comprised between 13mm and 17mm, said lateral band of the negative electrode has a height comprised between 8mm and 12mm, and wherein said plane connection is welded at a distance of at least 3mm from one end of the separator of the electrochemical bundle. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to adjust the height of the positive and negative electrodes and the distance of the welding, so long as the mechanical strength requirements of the electrochemical bundle can be met, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. See MPEP 2144.05.

7. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cailley et al. (US 3,761,314), as applied to Claims 1-11 above, and in further view of Ura (EP 1102337 A1).

Cailley et al. discloses the system in paragraph 6 above, but does not disclose wherein the plane connection is a blade not covering the whole surface of the plane base formed by said folded lateral bands.

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Ura discloses wherein said plane connection is ribs, which could also be construed as a blade, provided on the current collecting plates not covering the entire surface of the plane base formed by said folded lateral bands. Figure 4 illustrates a modified example of a current collector plate (8, 9), in which a plurality of ribs (16) are formed projecting towards the projected portions of the current collectors (1b, 2b) of the electrode plate group (10) so as to form flat planes (paragraph 0030). Therefore, at the time of the invention, it would have been obvious to one of ordinary skill in the art to form the plane connection in the system of Cailley et al., as a blade because Ura teaches that the flat planes make reliable contact with the currents collecting plates (8, 9) through the ribs (16), whereby current collecting plates (8, 9) and current collectors (1b, 2b) can be welded together even more reliably (paragraphs 0030-0031).

Response to Arguments

8. Applicant's arguments with respect to claims 1-11 and 13 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karie O'Neill whose telephone number is (571)272-8614. The examiner can normally be reached on Monday through Friday from 8am to 5pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Karie O'Neill
Examiner
Art Unit 1795

KAO

/Mark Ruthkosky/

Primary Examiner, Art Unit 1795